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A-67-26

DEPARTMENT OF TRANSPORTATION
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20591

SEP 1 1967

IN REPLY
REFER TO: SB-1-96

Honorable William F. McKee
Administrator
Federal Aviation Administration
Department of Transportation
Washington, D. C. 20590

Dear General McKee:

Investigation of a compressor failure involving a General Electric CJ-805 engine installed in Delta Air Lines Convair 880, N8815E, disclosed evidence of 7th and 8th stage compressor disk distress in the form of corrosion pitting as well as evidence of a fatigue fracture in the 8th stage compressor disk. The failed part had accumulated 10,715 operating cycles at the time of the failure. A second, more recent, failure of a CJ-805 compressor, involving the identical parts occurred under similar circumstances after accumulating 11,548 operating cycles.

The life limitation of 16,500 operating cycles presently imposed upon these P/N 106R681P1 and 106R682P1 disk assemblies indicates the need for an appropriate reduction in their service life. General Electric Alert Service Bulletins A72-254 and A72-261 impose a progressive reduction of compressor disk service life. In order to preclude similar incidents in the future, it is recommended that the above service bulletins be made the subject of an immediate airworthiness directive.

We are informed that improved, redesigned and more durable versions of the subject compressor disks are currently being considered for release by the manufacturer. It is recommended that incorporation of these improved compressor disks be on a mandatory and expedited basis upon availability of the parts.

A photo depicting the results of the compressor disk failure on N8815E during takeoff from Newark, New Jersey Airport on June 24, 1967 is attached.

Sincerely yours,

Joseph J. O'Connell, Jr.
Chairman

Attachment

TRANS AIR LINES - CONVAIR 880 [illegible]
FLIGHT [illegible], JUNE 24, 1967

No. 4 ENGINE - GENERAL ELECTRIC CJ-805-3 S/N 301-[illegible]
ENGINE COMPRESSOR ENTRANCE FORWARD OF 4TH STAGE COMPRESSOR BLISK